

Appl. No. 10/709,552
Amdt. dated June 14, 2006
Reply to Office action of May 18, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 5 Claim 1 (previously presented) A method of forming a barrier layer comprising:
- (a) providing a substrate having a cobalt silicide and a plug hole exposing the cobalt silicide;
 - (b) performing a chemical vapor deposition (CVD) process for forming a Ti/TiN film, functioning as the barrier layer, onto the cobalt silicide and inner walls of the
 - 10 plug hole;
 - (c) performing an examination procedure, and if particles are detected in the barrier layer, then performing step (d); and
 - (d) performing a rework procedure comprising:
 - performing a wet etching process to remove the barrier layer, the wet etching
 - 15 process being implemented with an acid solution comprising phosphoric acid (H_3PO_4), nitric acid (HNO_3), acetic acid (CH_3COOH), and water (H_2O), wherein the ratio of phosphoric acid, nitric acid, acetic acid, and water in the acid solution is between (38-41):(1-1.5):(1.8-2.1):(2.8-3.2);
 - scrubbing the substrate with a scrubber machine for removing the
 - 20 particles;
 - rinsing the substrate with a cleaning solution; and
 - performing another CVD process for forming another Ti/TiN film onto the cobalt silicide and the inner walls of the plug hole.
- 25 Claims 2-4 (cancelled)

Claim 5 (original) The method of claim 1 wherein the cleaning solution is a sulfuric acid

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(H₂SO₄) solution.

Claim 6 (original) The method of claim 1 wherein the examination procedure is performed for detecting the particles that influence electrical property.

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Claims 7-15 (cancelled)